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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,028	06/15/2005	Michael Perkuhn	DE 020292	2557

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EXAMINER
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CATTUNGAL, SANJAY

ART UNIT	PAPER NUMBER
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3768

MAIL DATE	DELIVERY MODE
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11/26/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/539,028	<b>Applicant(s)</b> PERKUHN ET AL.	
	<b>Examiner</b> SANJAY CATTUNGAL	<b>Art Unit</b> 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Objections***

1. The amendment dated 02/11/10 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: Claim 21 recites “the resonant circuit *does not surround any perimeter of the human subject*” which has not been specified anywhere in the written disclosure (specification) and hence is not supported by the specification and considered new matter.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 21 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim language “*does not surround any perimeter of the human subject*” has not been specified anywhere in the written disclosure

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(specification) and hence is not supported by the specification and considered new matter.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 21, 27-30, 35, and 40, are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent No. 6,374,667 to Eriksen et al.**

5. Regarding **Claims 21 and 35**, Eriksen teaches a system and method that monitors physiological states, comprising: a power supply (fig. 6 element 117 is a signal generator which is a power supply); a resonant circuit (fig. 6 element 101) that induces an oscillating magnetic field in response to receiving energy from the power supply to a volume of interest of a human subject in the magnetic field where the resonant circuit does not surround a perimeter of the human subject (fig. 6 element 101 can be broadly viewed as not surrounding the feet and head of the subjection 110) and provides a signal characteristic of a power loss (every coil is capable of producing a signal characteristic of a power loss since a magnitude zero signal would be a signal characteristic of a power loss); and a detector that detects the signal (fig. 6 element 133 and 127 are amplifier and rectifier/detector for detecting the signals from the volume),

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wherein the signal is used to monitor a physiological state of the human subject (col. 6 lines 50-65 teaches measuring breathing, which is a physiological state).

6. Regarding **claim 27**, Eriksen teaches using the signal to monitor blood flow (fig. 13 teaches change in blood volume over time in the chest cavity, which can be used to calculate the blood flow in the chest cavity).

7. Regarding **claim 28**, Eriksen teaches using the signal to monitor edema (col. 5 lines 12-14).

8. Regarding **claims 29 and 40**, Eriksen teaches that the volume is a human heart, and the resonant circuit is placed chest of the human proximate to the heart (col. 6 lines 37-40 teaches monitoring for heart failure).

9. Regarding **claim 30**, Eriksen teaches using the signal for calculating respiration rate of the subject (col. 6 lines 60-64 calculating quantitative amount of breathing, which is respiration rate and fig. 9 element 107).

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 22, 23, 25, 26, 31, 34, 36, 37, and 39, are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 6,374,667 to Eriksen et al. in view of U. S. Patent No. 6,359,449 to Reining et al.**

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12. Regarding **Claims 22, 31, and 36**, Eriksen teaches all of the above claimed limitations but does not expressly teach that the resonant circuit resides within a sub-portion of a front side of the clothes worn by the subject.

13. Reining teaches a Vest coil, where in the resonant circuit is within in the front portion of clothes (vest) worn by the subject (Fig. 1 elements 14, 16 and 22 as such the coils are in the front portion of the clothes, and are interwoven with fabric/threads,).

14. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Eriksen with a setup to place the coils in clothes as taught by Reining since such a setup would be more comfortable for the subject as the coils would not be in direct contact with the subject, as such would cause less irritation.

15. Regarding **claims 23 and 37**, Reining teaches a coil having conductors, wherein the resonant circuit is integrated into an insulating fabric carrier and the conductors are interwoven with threads of the insulating fabric carrier (Fig. 1 elements 14, 16 and 22 as such the coils are in the front portion of the clothes, and are interwoven with fabric/threads, elements 14, 16, 18, 20 are different circuits, and the claim recites only one circuit that needs to be in the front portion).

16. Regarding **claims 25, 26 and 39**, Reining teaches a second resonant circuit that induces a magnetic field in a reference volume of the subject and that provides a second signal characteristic a state of the reference volume and comparing the signals (col. 3 lines 28-34 teaches 2 coils and comparing the signals, where in one signal is a reference volume signal).

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17. Regarding **Claim 34**, Reining teaches generating an alarm (col. 3 lines 28-34 teaches 2 coils and comparing the signals, where in one signal is a reference volume signal and generate an alarm if it detects distress).

18. **Claims 24 and 38, are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 6,374,667 to Eriksen et al. in view of U. S. Patent No. 6,186,941 to Blackwell.**

19. Regarding **Claims 24 and 38**, Eriksen teaches all of the above claimed limitations but does not expressly teach that the resonant circuit is integrated into a bandage affixed to the human subject.

20. Blackwell teaches that resonant circuit is integrated into a bandage affixed to the human subject (col. 6 lines 49-51 teaches attaching coil on a subject using elastic bandages, as such the coil is integrated onto a bandage).

21. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Eriksen with a setup to use bandages to attach coil as taught by Blackwell, since such a setup would make it easy to place/remove the coils from the subject.

22. **Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 6,374,667 to Eriksen et al. in view of U. S. Patent No. 5,760,688 to Kasai.**

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23. Regarding **Claims 32 and 33**, Eriksen teaches all of the above claimed limitations but does not expressly teach that the resonant circuit is integrated into a furniture/bed sheet.

24. Kasai teaches that the fabric carrier is part of a furniture (Fig. 5) but does not expressly teach that the insulating fabric carrier is a bed sheet.

25. It would have been obvious to one of ordinary skill in the art at the time of invention to modify Eriksen with a setup such that the coil is in a furniture as taught by Kasai or bed sheet, since such a setup would result in the system being more flexible and usable in many different situations, moreover where you place the coil is merely a design choice, since the coil needs to be near the subject, and whether the coil is on the subject or the furniture as long as the region of interest is within the coil's magnetic field it would be able to generate a signal, and detect the physiological state.

### ***Response to Arguments***

26. Applicant's arguments with respect to claims 21-40 filed on 09/07/2010 have been considered but are not persuasive.

27. Applicant argues that the new matter rejection should be withdrawn since figs. 3 and 4 teach coils that are not surrounding any perimeter of the subject. Examiner would like to point out that the coils in figs. 3 and 4 of the application would surround the perimeter of the subject when being used for the physiological monitoring procedure. Since the subject needs to either wear the coil of fig. 3 or lie down on the coil of fig. 4. Examiner agrees that when the coil is not in operation it does not surround any



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perimeter of the subject, but would like to point out that, the same is true for any coil, since when not in use its not placed on the subject. As such the new matter rejection is maintained.

28. Objections to claim 22 have been overcome and as such withdrawn. 101 rejections with respect to claim 21 has been overcome as such withdrawn.

29. Regarding Claims 35 and 40, applicant argues that claims recite that the resonant circuit is located only on the front side of the subject. Examiner would like to point out that the claims recite "placing a resonant circuit near a volume of interest" and further "placing the resonant circuit on the front of the subject". Examiner would like to point out that the '449 patent teaches a resonant coil comprising multiple circuit elements 14, 16, 18, etc. as such, one of all of these elements is capable of being placed in the front portion of the subject, specifically the chest. In fig. 1 element 14 is placed in the front of the subject, but similarly element 18 could be placed. All claim elements have been met and the rejection is maintained and is made FINAL.

### ***Conclusion***

30. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

31. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SANJAY CATTUNGAL whose telephone number is (571)272-1306. The examiner can normally be reached on Monday-Friday 9-5.

33. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on (571) 272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

34. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SANJAY CATTUNGAL/  
Examiner, Art Unit 3768